

Customer No. 24498
Attorney Docket No. PF030001
Office Action Date: 1/21/2010

REMARKS

This application has been reviewed in light of the Office Action dated January 21, 2010. Claims 1–20, 23–24, and 26–29 are pending in the application. Claims 21–22 and 25 have been cancelled without prejudice. Claims 1, 16, 20, 23, and 28 have been amended. New claim 29 has been added. No new matter has been introduced. Reconsideration of the rejection in light of the arguments and the amendments is respectfully requested.

The amendment to claims 1 and 16 is supported in the present specification at least on page 8, lines 11–31. The amendment to claims 20 and 23 is a clarification intended to remove the objected-to word “neighbour.” The amendments to claim 28 and new claim 29 present the elements of claim 28 as being dependent from claims 1 and 16 respectively.

Initially, the Examiner asserts an election against claim 28 as being directed to an invention that is independent or distinct from the originally claimed invention, noting that the claim did not share any of the elements of the other independent claims. Although Applicants disagree, noting in particular that claim 16 recites the use of a storage means that stores clustered audio tracks, Applicants have amended claim 28 to explicitly depend from claim 16. It is therefore believed that claim 28, as well as new claim 29 depending from claim 1, are directed to the elected invention and should be examined.

Claim 20, 22, and 23 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

With respect to claim 22, it should be noted that the claim has been cancelled without prejudice. It is therefore believed that the rejection with respect to claim 22 is moot.

With respect to claims 20 and 23, the Examiner asserts that the term “neighbour” does not appear in the specification as originally filed. While the term is believed to be supported,

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Applicants have amended the claims to remove this term to further prosecution. It is therefore believed that the claims are fully supported by the specification as filed and comply with the written description requirement.

Reconsideration of the rejection is earnestly solicited.

Claims 20, 22, and 23 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter of the invention.

With respect to claim 22, it should be noted that the claim has been cancelled without prejudice. It is therefore believed that the rejection with respect to claim 22 is moot.

With respect to claims 20 and 23, the Examiner asserts that the term "neighbour" is a relative term and is therefore indefinite. However, as noted above, the term "neighbour" has been removed from the claims by the present amendments. It is therefore believed that claims 20 and 23 are clear and definite.

Reconsideration of the rejection is earnestly solicited.

Claims 1-2, 4-10, 12-13, 16-20, 23, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,149,755 to Obrador (hereinafter "Obrador") in view of U.S. Patent No. 7,277,766 to Khan et al. (hereinafter "Khan") and further in view of U.S. Patent No. 6,278,446 to Liou et al. (hereinafter "Liou"). Applicants traverse this rejection for at least the following reasons.

Claim 1 recites, *inter alia*, "classifying the audio tracks into groups or clusters; ... upon said creating the second cluster, classifying one or more further audio tracks of said audio tracks into the second cluster." Claim 16 recites analogous language. The Examiner concedes that

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Obrador and Khan fail to disclose this feature, but asserts in argument that Liou teaches it in FIG. 11, blocks H-P, particularly block L. Applicants respectfully disagree. Referring to FIG. 11, blocks A-G, Liou puts all of its "shots" into clusters, creating new clusters whenever a given shot is sufficiently dissimilar to existing shots (block D). When no more shots exist, it moves onto the cited portion of the procedure, H-P. However, although block L places members into new clusters, such placement is not done upon the *creation* of a new cluster. In fact, it is entirely possible for Liou's procedure to use one, and only one, cluster, never creating a new cluster at all. For example, if the shots all fall within the given color threshold, the procedure will never reach block F and no new clusters will be created. Even if clusters were to be created, there is no logical connection between such creation (block E) and the eventual movement of movement of members between clusters (block L).

Bear in mind that the claim recites "upon said creating the second cluster." This language creates a causal relationship between the creation of the second cluster and the classification of further audio tracks into said second cluster. Liou fails to disclose or suggest such a causal relationship. For at least these reasons it is respectfully asserted that Obrador, Khan, and/or Liou, taken alone or in any combination, fail to disclose or suggest classifying further audio tracks into a second cluster upon creation of said second cluster.

Claim 1 further recites, "a storage means within a portable audio playback device without a display for displaying audio content." Claim 16 recites analogous language. The Examiner has not yet accounted for this element. It should be noted that, although this language is in the preamble of the claim, "Any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation." MPEP § 2111.02(I). It is respectfully asserted that Obrador, Khan, and/or Liou, taken alone or in any combination, fail to disclose or suggest a

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storage means within a portable audio playback device without display.

Claim 1 further recites, "selecting automatically a first audio track as being a representative for the second cluster, wherein the medoid of the second cluster is selected."

Claim 16 recites analogous language. The Examiner asserts that Obrador teaches this element and cites a passage that refers to centroids.

It is respectfully pointed out to the Examiner that medoids are distinct from centroids. As those having ordinary skill in the art will recognize, a medoid will always be a member of the data set it refers to, whereas a centroid has no such requirement. In this respect, they are analogous to the concepts of "mean" and "median." For example, taking the data points {1, 9, and 11}, the centroid will be 7, whereas the medoid will be 9. Citing the use of a centroid therefore does not read on the present claims, as a centroid will not necessarily be a medoid. Neither Khan nor Liou make any reference to medoids and cannot cure the deficiencies of Obrador in this respect. It is therefore respectfully asserted that Obrador, Khan, and/or Liou, taken alone or in combination, fail to disclose or suggest selecting the medoid audio track as being a representative of the second cluster.

For at least the above reasons, it is believed that Obrador, Khan, and/or Liou, taken alone or in any combination, fail to disclose or suggest all of the elements of claims 1 and 16. Because claims 2, 4-10, 12-13, 17-20, 23, and 26 depend from claims 1 and 16 and include all of the elements of their parent claims, it is believed that all of claims 1-2, 4-10, 12-13, 16-20, 23, and 26 are in condition for allowance. Reconsideration of the rejection is earnestly solicited.

Claims 3, 11, and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Obrador in view of Khan and further in view of Liou and U.S. Patent No. 6,987,221 to Platt (hereinafter "Platt").

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Claims 3, 11, and 27 depend from claims 1 and 16 and include all of the elements of their parent claims. Platt cannot cure the deficiencies of the cited art described above. It is therefore respectfully asserted that Obrador, Khan, Liou, and/or Platt, taken alone or in any combination, fail to disclose or suggest all of the elements of claims 3, 11, and 17. Reconsideration of the rejection is earnestly solicited.

Claims 14 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Obrador in view of Khan and further in view of Liou and U.S. Patent No. 7,043,477 to Mercer et al. (hereinafter "Mercer").

Claims 14 and 15 depend from claim 1 and include all of the elements of their parent claim. Mercer cannot cure the deficiencies of the cited art described above. It is therefore respectfully asserted that Obrador, Khan, Liou, and/or Mercer, taken alone or in any combination, fail to disclose or suggest all of the elements of claims 14 and 15. Reconsideration of the rejection is earnestly solicited.

Claim 24 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Obrador in view of Khan and further in view of Liou, U.S. Patent No. 7,072,846 to Robinson (hereinafter "Robinson"), and Approximate Nearest Neighbor Searching in Multimedia Databases by Ferhatosmanoglu et al. (hereinafter "Ferhatosmanoglu").

Claim 24 depends from claim 16 and includes all of the elements of its parent claim. Robinson and Ferhatosmanoglu cannot cure the deficiencies of the cited art described above. In addition, claim 24 includes patentable subject matter separate and apart from that recited in the independent claims.

Claim 24 recites, "wherein the means for assigning at least one of the audio tracks of said first cluster to the second cluster uses the K-means algorithm to decide which audio tracks are

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assigned to the second cluster.” In the previous response, Applicants pointed out that Liou explicitly teaches away from the use of K-means clustering in column 10, lines 19–30.

The Examiner responds by pointing out that Robinson and Ferhatosmanoglu address K-means clustering. The Examiner states, “Therefore Liou does not teach that you would not ... ever want to use K-means clustering only that K-means clustering techniques known to Liou are not useful.” However, Applicants must emphasize that Liou says this because K-means clustering requires a priori knowledge that is not available to Liou. Liou explicitly states, “The choice of clustering strategy is limited by having no a priori knowledge of the number of clusters or assumptions about the nature of the clusters.” As such, K-means clustering is *fundamentally* incompatible with Liou.

The Examiner relies on Robinson and Ferhatosmanoglu to “address the original concerns of Liou,” but it does not appear that Robinson or Ferhatosmanoglu in any way address the issue of K-means requiring a priori knowledge. The MPEP is unambiguous on this point, “It is improper to combine references where the references teach away from their combination.” MPEP §2145(X)(D)(2). It is clear that Liou explicitly states that K-means clustering cannot be used for Liou’s technique. Liou gives concrete reasons for why that is the case and the references the Examiner cites do nothing to correct those problems. As such, it is respectfully asserted that Liou *teaches away* from the use of a K-means algorithm. Therefore there is *no* reference which may be properly combined with Liou to teach the use of K-means clustering.

For at least the above reasons it is respectfully asserted that Obrador, Khan, Liou, Robinson, and/or Ferhatosmanoglu, taken alone or in any combination, fail to disclose or suggest all of the elements of claims 24. Reconsideration of the rejection is earnestly solicited.

In view of the foregoing amendments and remarks, it is respectfully submitted that all the

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claims now pending in the application are in condition for allowance. Early and favorable reconsideration of the case is respectfully requested.

It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may -be charged to Applicant's representatives Deposit Account No. 07-0832.

Respectfully submitted,

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